

DOCUMENT RESUME

ED 255 337

RC 015 189

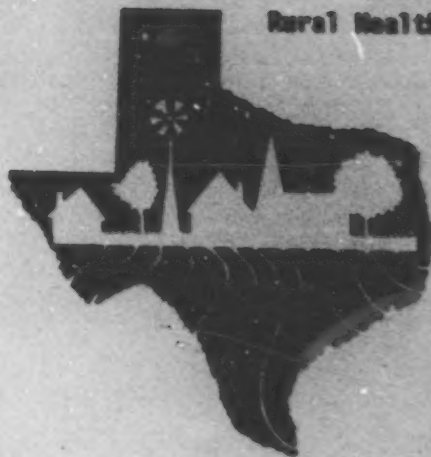
AUTHOR Morrison, Nolan; And Others
TITLE Rural Health Care in Texas: The Facts--1984.
INSTITUTION Texas Univ., Austin. Center for Social Work Research.
SPONS AGENCY Hoblitzelle Foundation, Dallas, TX.; Meadows Foundation, Dallas, Tex.; Richardson (Sid W.) Foundation, Fort Worth, Tex.
PUB DATE Jan 85
NOTE 36p.; For related document, see ED 251 259; Also sponsored by the Trull Foundation.
PUB TYPE Reports - Descriptive (141)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adolescents; Agriculture; Alcoholism; Children; Crime; Delivery Systems; Drug Abuse; Energy; Environmental Influences; Ethnic Groups; *Health Conditions; Health Facilities; *Health Personnel; Health Services; Housing; Incidence; Maps; *Mental Health; Older Adults; *Physical Health; Poverty; *Rural Areas; Rural Education; *Rural Population; Transportation
IDENTIFIERS *Texas

ABSTRACT

The size of Texas and the distribution of its population result in service delivery, economic, educational, transportation, communication, and health problems. Texas is the second largest state in the nation, is third largest in population, has a population growing at a faster rate than the national average, and is a primarily rural state--20% of the population is nonmetropolitan and lives on 80% of the land. Although rural communities are pictured as clean places where the value systems are something to be envied, the reality is different. Accident rates are higher in rural areas than urban areas. Rural living produces drug abuse, domestic violence, depression, and teenage pregnancy just as frequently as does urban living. In addition, rural Texans have less education, lower incomes, and higher death rates than urban Texans. Rounding out this gloomy picture are higher incidences of substandard housing, poor communication and transportation systems, and inadequate sewage and water systems in rural areas. The report presents statistics on the population, poverty, children, elderly, health status, mental health, alcoholism and drug abuse, environmental health, health and medical facilities and health manpower, federal health programs, agriculture, crime, education, energy, housing, and transportation. Maps and extensive references conclude the document. (BRR)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED0255337



Rural Health Care in Texas: The Facts--1984

Prepared by

Nolan Morrison
Research Assistant

Yvonne D. Knudson
Administrative Secretary

Mary Walker, RN, PhD, FAAN
Program Director

Nora Mullarkey
Research Associate

Lonna Milburn, RN, MS
Research Associate

Texas Rural Health Field Services Program
Center for Social Work Research
School of Social Work
The University of Texas at Austin
2609 University Avenue
Austin, TX 78712
(512)-471-9606



"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

m Walker

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

↓ This document has been reproduced as
received from the person or organization
originating it.
Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official NIE
position or policy.

January 1985

Program support provided by the Meadows Foundation, Sid W. Richardson Founda-
tion, Hoblitzelle Foundation, Trull Foundation, an anonymous Texas foundation,
and corporate and individual donations.

RC015189

RURAL HEALTH CARE AND TEXAS: THE FACTS--1984

With 15.9 million people, Texas is the third most populous state in the nation.⁵ The state is primarily rural,* both from the standpoint of sparsely population land area and in economic resources. Only 54 of Texas' 254 counties are included in the 25 federally designated metropolitan areas of Texas.¹ Two hundred counties are designated as nonmetropolitan.**

Texas is second only to Alaska in size, with 262,840 square miles of land and 4,499 square miles of inland water.² Within the state are extensions of the Chihuahuan desert of Mexico, the Caribbean tropics, the Great Plains of the U.S., and the Southern Piney Woods. The state has some distinctive geographic features of its own, such as the Blacklands area that wedges through the north central section of Texas, and 367 miles of coastline. Texas has 93 mountains that are more than a mile high, 23,400,000 acres of forest land, and over 70,000 miles of highways.² Texas leads all states in production of crude oil, natural gas, and such agricultural products as beef cattle, sheep and lambs, wool and mohair, cotton, grain sorghum, watermelons, and spinach. It rivals California and Florida in citrus production.³

Texas' population is growing at a faster rate than the national average, advancing from the sixth largest state in 1960 to the third largest state in 1980. Twenty percent of the population of Texas is nonmetropolitan and lives on eighty percent of the land in the state. Though this may not appear to be a very large proportion, the rural population of Texas is larger than the

*In this fact sheet, the definition of "rural" varies depending on the source of the information, but refers to a population group smaller than non-metropolitan.

**A nonmetropolitan area is designated as any area which is outside a Standard Metropolitan Statistical Area (SMSA). An SMSA consists of "an urbanized area with at least 50,000 inhabitants" and outlying counties which have close economic and social relationships with the central county or counties.¹

total combined populations of Alaska, Delaware, Nevada, Vermont, and Wyoming.¹ The size of the state and the distribution of the population result in service delivery, economic, educational, transportation, communication, and health problems.

Rural communities are considered to be places where the air is clean, the sky is blue and the value systems are something to be envied. However, statistics show that accident rates are higher in rural areas than in urban areas. Rural living produces drug abuse, domestic violence, depression and teenage pregnancy just as frequently as does urban living. In addition, rural Texans have less education, lower incomes, and higher death rates than urban Texans. Rounding out this gloomy picture are higher incidences of substandard housing, poor communication and transportation systems, and inadequate sewage and water systems in rural areas.

Population

General

Between 1980 and 1990, the population of Texas is expected to grow from 14.2 million to 16.7 million people.⁴

The nonmetropolitan population in Texas grew by 18% between 1970 and 1980. It is projected to increase by another 18% between 1980 and 1990. In contrast, the metropolitan population in Texas increased by 30% between 1970 and 1980. It is projected to increase by 27% between 1980 and 1990.⁵

During the 1990s, it is expected that Texas will surpass New York and become the second most populous state, behind California.⁴

Over 50% of the population growth in Texas is due to immigration.⁶

Forty-one percent of the nonmetropolitan population is 24 years old or younger. Forty-five percent of the metropolitan population is 24 years old or younger.¹

Thirty-eight percent of the nonmetropolitan population is between 25 and 59 years of age. Forty-three percent of the metropolitan population is in this age group.¹

Twenty percent of the nonmetropolitan population is 60 years old or older. Only twelve percent of the metropolitan population is 60 years old or older.¹

Between 1950 and 1980, the median age for persons in nonmetropolitan counties increased from 28.8 years to 33 years of age. For persons in metropolitan counties, the median age increased from 28 years to 28.8 years of age during the same period.⁷

The ten nonmetropolitan counties showing the greatest percentage increase in population between 1970 and 1980 were Maverick (74%), Polk (69%), Henderson (61%), Starr (54%), Walker (51%), Kerr (48%), Anderson (38%), Matagorda (36%), Angelina (30%) and Nacogdoches (29%).⁵

The nonmetropolitan county with the largest population is Angelina, with a population of 64,172. The nonmetropolitan county with the smallest population is Loving, with a population of 91.⁵

In 1983 the marriage rate for the state of Texas was 12.7 marriages per 1,000 population. In metropolitan counties this rate was 12.9 per 1,000, and in nonmetropolitan counties this rate was 11.7 per 1,000 population.⁸

In 1983 the divorce rate for the state of Texas was 6.5 divorces per 1,000 population. For metropolitan counties this rate was 6.6 per 1,000, and for nonmetropolitan counties this rate was 6.0 per 1,000 population.⁸

In 1960, 20% of the women 16 years of age or older in nonmetropolitan Texas were employed in the labor force. By 1980, 39% of nonmetropolitan women were so employed--a 98% increase. For metropolitan women, 25% were employed in the labor force in 1950; in 1980 this figure had risen to 49%--a 93% increase.⁹

Sex and Age

Twenty percent of the males and twenty percent of the females in Texas live in nonmetropolitan areas.¹

Forty-three percent of the nonmetropolitan male population and 39% of the nonmetropolitan female population are 24 years of age or younger. In contrast, 47% of the metropolitan male population and 44% of the metropolitan female population are 24 years of age or younger.¹

Thirty-nine percent of the nonmetropolitan male population and 38% of the nonmetropolitan female population are between 25 and 59 years of age. For the metropolitan population, 44% of the males and 43% of the females are between 25 and 59 years of age.¹

Eighteen percent of the nonmetropolitan males in Texas and 23% of the females are 60 years of age or over. In comparison, 10% of the metropolitan males and 13% of the females are 60 years of age or over.¹

Race and Age

For nonmetropolitan Texas, 71% of the population is white, 9% is black, 19% is of Spanish origin, and just under 1% is other races. For metropolitan Texas, 81% of the population is white, 13% is black, 4% is of Spanish origin, and 3% is other races.¹

Thirty-nine percent of the white nonmetropolitan population, 48% of the nonmetropolitan black population, and 57% of the nonmetropolitan population of Spanish origin are 24 years of age or younger. In contrast, 43% of the metropolitan white population, 51% of the metropolitan black population, and 56% of the metropolitan population of Spanish origin are 24 years of age or younger.¹

Thirty-nine percent of the white nonmetropolitan population, 32% of the black nonmetropolitan population, and 35% of the nonmetropolitan population of Spanish origin are between 25 and 59 years of age. In comparison, 45% of the metropolitan white population, 39% of the metropolitan black population, and 37% of the metropolitan population of Spanish origin are between 25 and 59 years of age.¹

Twenty-two percent of the white nonmetropolitan population, 10% of the nonmetropolitan black population, and 9% of the nonmetropolitan population of Spanish origin are 60 years of age or over. On the other hand, 13% of the white metropolitan population, 10% of the black metropolitan population, and 7% of the metropolitan population of Spanish origin are 60 years old or older.¹

Of the children and youth under age 18 in Texas, 75% are white, 29% are of Spanish origin, and 14% are black. In metropolitan areas, 73% of the children under age 18 are white, 15% are black, and 29% are of Spanish origin. In nonmetropolitan areas, 78% are white, 11% are black, and 28% are of Spanish origin.¹

Of the elderly age 65 years and over in Texas, 86% are white, 11% are of Spanish origin, and 10% are black. In metropolitan areas, 84% of the elderly are white, 11% are black, and 12% are of Spanish origin. In nonmetropolitan areas, 88% of the elderly are white, 9% are black, and 8% are of Spanish origin.¹

Poverty

Data from 1980 suggest an overall poverty rate of 14% for Texas. When broken down into metropolitan/nonmetropolitan, we find poverty rates of 18% for nonmetropolitan areas and 13% for metropolitan Texas.¹

The 1980 Census indicated that 26% of the poverty population in Texas was located in nonmetropolitan areas.¹⁰

Overall, Texas' poverty population is projected to increase by .9 million between 1980 and 1990, to a total of 3.3 million.¹¹

The poverty population 19 and younger is projected to increase 30% between 1980 and 1990, to a total of 1.3 million. The poverty population 65 and older is projected to increase 38% during the same period, to a total of .5 million.¹¹

Between 1980 and 1990, the number of Texans 19 and younger who fall below the state median income is expected to increase 31%, to a total of 3.0 million, and the number of Texans 65 and older who fall below the state median income will increase 38%, to a total of 1.0 million.¹¹

Of the ten counties in Texas with the highest per capita incomes in 1980, 7 were nonmetropolitan counties. All ten had per capita incomes over \$8,000.¹

Of the ten counties in Texas with the lowest per capita incomes in 1980, 9 were nonmetropolitan counties. All ten had per capita incomes under \$4,500.¹

The average per capita income for nonmetropolitan counties in Texas was \$6,445 in 1980, as compared with \$7,399 for metropolitan counties.¹

According to information from the 1980 Census, per capita income in Texas rose 156% between 1970 and 1980, to a per capita income of \$7,206.¹

The average median family income for nonmetropolitan counties in Texas in 1980 was \$17,744, while metropolitan counties had an average median family income of \$20,080 (13% higher).¹

Rural Texans account for 27% of the state's total Medicaid eligibles.¹²

Nonmetropolitan residents accounted for 32% of the medical assistance benefits for aged and disabled and 20% of those to families and children which were paid in 1983.¹²

Twenty-four percent of the food stamp value and 20% of the Aid to Families with Dependent Children payments paid in 1983 went to nonmetropolitan residents.¹²

While the overall unemployment rate for Texas in 1983 was 8%, 14% of the labor force in nonmetropolitan counties was unemployed. The rate for metropolitan counties during the same period was 7%.¹³

Of the 46 counties with unemployment rates of 10% or more during 1983, 33 are nonmetropolitan. Two nonmetropolitan counties had the highest unemployment rates in the state: Starr with 41% and Maverick with 36%.¹³

In 1983, the average monthly total wages paid per month in nonmetropolitan counties totalled \$6,691,799; for metropolitan counties the average was \$145,853,478.¹⁴ This breaks down to an average annual wage per worker of \$13,156 for workers in nonmetropolitan counties and \$16,299 for metropolitan counties.^{13,14}

Children

Twenty percent of Texas' children age 17 and under live in nonmetropolitan counties.¹

Children age 17 and under make up just under 30% of the population in nonmetropolitan areas, and just over 30% of the population in metropolitan areas.¹

While 23% of the children age 17 and under in nonmetropolitan Texas live below the poverty line, 17% of the children 17 and under in metropolitan Texas live in poverty.^{1,5}

The birth rate for nonmetropolitan Texas was 17.9 per 1,000 population in 1983. This compares to a metropolitan birth rate of 21.5 per 1,000 population.¹⁵

Of the 295,178 births in Texas during 1983, 50,521 (17%) were to nonmetropolitan residents.¹⁶

Four percent of all births in nonmetropolitan Texas in 1983 took place outside of hospitals; in metropolitan Texas the rate was 3%.¹⁶

Six percent of all births in Texas in 1983 were to mothers under 18 years of age. In nonmetropolitan counties the rate was 8%.¹⁶

Seventeen percent of all babies with low birth weight (2500 grams or less) were born to mothers in nonmetropolitan counties.¹⁶

Nonmetropolitan counties in which there was a high incidence of low birth weight babies in 1983 included Motley (24%), Armstrong (18%), Hudspeth (16%), Irion (16%), and Mitchell (15%).¹⁶

In nonmetropolitan Texas in 1983, 41% of all births received no or untimely prenatal care. The rate for metropolitan Texas was 36%.¹⁶

In nonmetropolitan Texas, there were 12.0 illegitimate births per 1,000 live births in 1983, while in metropolitan Texas there were 15.4 illegitimate births per 1,000 live births (28% higher).¹⁷

The infant death rate for nonmetropolitan Texas is 11.5 deaths per 1,000 live births. In metropolitan areas this rate is 10.9 per 1,000.¹⁵

The maternal mortality rate for nonmetropolitan Texas in 1983 was 11.8 per 100,000 population. For metropolitan Texas, this rate was 4.9 per 100,000 population (141% higher).¹⁵

Of the 132 Texas counties that had more than 100 live births to county residents in 1983, 83 were nonmetropolitan.¹⁸

In 1983, of the 1,574 out-of-hospital births in nonmetropolitan counties in Texas, 53 were reported as attended by certified nurse midwives and 964 by lay midwives.¹⁸

There are 56 nonmetropolitan counties in Texas which have no public maternity or family planning services.¹⁹

In 1983, the Texas Department of Human Resources investigated 57,710 reports of suspected child abuse and neglect. Statistics showed a 9% increase in reports of suspected child abuse and neglect.¹²

Elderly

A new study of census data indicates that during the last decade increasing numbers of the elderly moved to urban areas, reversing the trend of elderly movement to rural areas which had previously been established. One reason for this, the study suggests, may be that rural America was hurt more by the 1979-80 recession than urban America.²⁰

Thirteen percent of the total state population is 60 years of age or older. Thirty percent of this population reside in nonmetropolitan areas, even though nonmetropolitan areas account for only 20% of the total state population.²¹

Twenty percent of the nonmetropolitan population is 60 years old or over. Twelve percent of the metropolitan population is age 60 or over.²¹

On the average, 8% of the population in a nonmetropolitan county is age 75 or over. In the average metropolitan county, 4% of the population is 75 or over.²¹

Thirty-three percent of those 75 years old or older live in nonmetropolitan counties.²¹

It is projected that by the year 2000 the 60 years and over population will double and the group 75 years old and over, which tends to need more social and health services, will increase by 130%.²²

Only 7% of older Texans live in nursing or convalescent homes. The other 93% live independently in their own homes.²³

Rural residence magnifies the effect of age on poverty. Thirty-three percent of the rural population aged 75 or over live below the poverty line.²² Eighteen percent of those 60 years old or over live at or below the poverty line.¹⁰

On the average, 31% of the 60+ population in a nonmetropolitan county live within 125% of the poverty line. For metropolitan counties, this average is 25%.²¹

On the average, minorities make up 18% of the 60 and over population in a nonmetropolitan county. Minorities make up 19% of the 60 and over population in the average metropolitan county.²¹

One survey indicated elder abuse to be as significant a problem in rural areas as in urban areas.²⁴

Health Status

The four leading causes of death in Texas are heart disease, cancer, cerebrovascular disease, and accidents. The death rates for these four leading causes, and for deaths by all causes, are at least 40% higher in nonmetropolitan Texas than in metropolitan Texas.⁸

The death rate for the state of Texas was 732.5 deaths per 100,000 population in 1983. For metropolitan counties this rate was 663.9 per 100,000 population, and for nonmetropolitan counties it was 1,012.5 per 100,000 (53% higher).⁸

For heart disease, the death rate in Texas was 256 deaths per 100,000 population. This rate was 226.2 per 100,000 population in metropolitan counties, but 369.8 per 100,000 in nonmetropolitan counties (64% higher).⁸

The death rate for cancer in Texas was 149.1 per 100,000 population in 1983. The metropolitan death rate was 138.3 per 100,000 population, as compared to 193.5 per 100,000 for nonmetropolitan counties (40% higher).⁸

The death rate for cerebrovascular disease was 56.9 per 100,000 population in 1983. In metropolitan counties this rate was 49 per 100,000 population, as compared to 89.3 per 100,000 population in nonmetropolitan counties (57% higher).⁸

For accidents other than motor vehicle accidents, the death rate in 1983 was 21.6 per 100,000 population in metropolitan Texas and 32 per 100,000 in nonmetropolitan Texas (48% higher).⁸

Deaths in nonmetropolitan counties accounted for 27% of all non-motor vehicle accidental fatalities in 1983.⁸

The death rate from motor vehicle accidents in 1983 was 26 deaths per 100,000 population in metropolitan Texas; during the same period there were 34 motor vehicle accident deaths per 100,000 population in nonmetropolitan areas.⁸

Deaths in nonmetropolitan counties accounted for 25% of all motor vehicle fatalities.⁸

Although only 14% of all highway accidents in Texas during 1983 occurred on highways in nonmetropolitan counties, 30% of the fatal accidents in the state took place in these counties.²⁵

The Texas Department of Health's goal is for all counties to have at least a 95% immunization level in all categories. In the 1983-84 school year, there were five counties with less than a 95% immunization level in at least one category. All of these counties were nonmetropolitan. Of the 60 school districts reporting less than a 95% immunization rate in any category, 46 (76%) were nonmetropolitan.²⁶

Eight percent of the venereal diseases occurring throughout the state in 1983 were reported from nonmetropolitan counties.²⁷

Sixteen percent of the tuberculosis cases in the state in 1983 were reported from nonmetropolitan Texas.²⁷

In 1983, Hispanics accounted for 39% of the reported cases of tuberculosis in Texas.²⁷

Mental Health

Suicide in Texas accounted for a death rate of 13.2 per 100,000 population in metropolitan Texas, but for only 11.8 per 100,000 in nonmetropolitan Texas (13% lower).⁸

Twenty-five percent of the admissions to state schools for the mentally retarded were from nonmetropolitan areas of the state in 1982.²⁸

Twenty-nine percent of those being admitted to state mental health facilities for one year or less were from nonmetropolitan counties.²⁸

Only 10 out of 254 counties in Texas did not admit at least one resident to a state hospital in fiscal year 1982. All 10 were nonmetropolitan counties.²⁸

The Texas Department of Mental Health and Mental Retardation operates 10 state mental hospitals and 13 state schools for the mentally retarded.²⁸

Only 4 of the 30 state community mental health centers furnish beds specifically for respite care for the mentally retarded. Most of the centers providing these services are in metropolitan counties.²⁸

Figures show that 24% of the 18-24 year olds admitted to state mental hospitals were from nonmetropolitan counties. This figure increases with each age group until age 65 and older, when 48% of the admissions are found to be from nonmetropolitan Texas.²⁸

Nonmetropolitan residents accounted for 38% of those patients who remained hospitalized for one to five years, and for 41% of those who were hospitalized for over five years.²⁸

Alcoholism and Drug Abuse

Alcohol

Statewide, 19% of all drivers in fatal accidents in 1983 were reported as DWI. Twenty-two percent of all drivers in rural fatal accidents in 1983 were reported as DWI.²⁵

In 1983, 31% of the fatalities in rural fatal accidents involved DWI, whereas only 26% of the fatalities in statewide fatal accidents involved DWI. Of those drivers who were involved in rural fatal accidents and reported as DWI, 74% were between 15 and 34 years of age and 45% were 20-29 years of age.²⁵

Of the 135,172 breath tests administered to drivers suspected of DWI in 1983, 59% were administered to drivers in rural areas. Of those rural drivers who were given the test, 82% were found to exceed the legal blood alcohol level of .10, which is presumptive evidence of intoxication.²⁵

Sixty-one (31%) of the 200 nonmetropolitan counties in Texas are dry. The remaining 139 (70%) are at least partially wet.²⁹

Self-reports of early use of alcohol by students between the ages of 10 and 12 years were indicated by surveys conducted in the predominantly rural Brazos Valley and Nortex regions of Texas.³⁰

A national study showed that 45-60% of all fatal crashes involving teenage drivers are alcohol related. DWI accidents most often occurred in cities with populations greater than 250,000 and in rural areas. The most typical alcohol-related ETOH admission to a Community Mental Health Center is male, Hispanic, and 22-24 years old.³¹

In rural areas, some persons must travel 100 miles or more for specialized treatment services for alcohol abuse and related problems.³⁰

Many alcohol abuse programs in rural areas are designed to serve two or more counties because rural areas must pool their resources to compensate for ever-increasing travel costs and inadequate funding.³⁰

According to one estimate, 22% of migrant and seasonal farmworkers are in need of specialized services for alcoholism and alcohol-related problems. In addition, alcohol addiction and abuse problems afflict 30% of the Alabama-Coushatta and 40% of the Tigua tribal members.³²

In a recent survey of over 1800 randomly selected Texans, 19% of the rural respondents reported at least one behavioral consequence of alcohol consumption (such as job, driving, or family problems).³³

Six percent of the nonmetropolitan population are problem drinkers.³⁴

Drugs

There were 45,735 drug-related arrests in the state of Texas in 1983. Of these, 19% were in nonmetropolitan counties.³⁵ In addition, there were 4,987 juvenile arrests for drug-related offenses in Texas in 1983. Thirteen percent of the juvenile arrests were in nonmetropolitan counties.³⁶

According to the Texas Survey on Drug Abuse (TSDA), 42% of their urban respondents and 35% of their rural respondents between the ages of 18 and 25 have used marijuana at some time in the present or past. Overall, 14% of their rural respondents and 20% of their urban respondents have had some experience with marijuana.³⁷

TSDA found some evidence of abuse of codeine in tablet and cough syrup form. In all, 11% of the TSDA urban respondents and 13% of the rural respondents have used codeine in tablet form at some time; 11% of the urban respondents and 10% of the rural respondents have had some experience with codeine in cough syrup form.³⁷

TSDA points to a higher use of barbituates in rural areas than in urban areas. Overall, 6% of the rural respondents and 5% of the urban respondents indicated at least some use of barbituates.³⁷

Although TSDA indicates a higher overall use of amphetamines among urban respondents (11%) than among rural respondents (10%), 13% of the rural respondents aged 26 and over and only 9% of the urban respondents in this age group reported some experience with amphetamines.³⁷

TSDA suggests that 18% of the urban respondents and 13% of the rural respondents have had some use of tranquilizers either in the present or past, whereas 22% of the urban respondents and 16% of the rural respondents aged 26 and over reported some present or past use of tranquilizers.³⁷

Overall, 53% of the TSDA rural respondents and 49% of the urban respondents report some use of tobacco either in the present or past.³⁷

Environmental Health

Air

In June 1984, 6 of the 24 major violators of Texas air quality standards were located in nonmetropolitan areas of Texas.³⁸

Around 40% of the air pollution complaints recorded each month at the Texas Air Control Board come from rural areas of Texas.³⁹

Water

Of the 43 public water systems in Texas which exceeded public drinking water standards for heavy metals, organics, and radiological parameters in 1982, 20 were in nonmetropolitan areas.⁴⁰

Fifty-nine percent of the 86 public drinking water systems cited for non-compliance in levels of nitrates were located in nonmetropolitan counties in Texas.⁴⁰

One indicator of drinking water quality is the total dissolved solids (TDS) standard. In 1982, 126 out of 254 Texas counties had at least one system which exceeded the total dissolved solids standard, and 52% of the 527 systems out of compliance were located in nonmetropolitan counties of Texas.⁴⁰

The American Heart Association recommends that healthy adults drink water containing 200 mg/liter of sodium or less. In 1983, 45% of the 1,396 public water systems with sodium levels above 200 mg/liter were located in nonmetropolitan counties.⁴⁰

Fluoride levels above 1.2 mg/liter may cause brown-colored mottling of teeth in children. In 1983, 1,073 public water systems in Texas exceeded 1.2 mg/liter. Fluoride levels above 3 mg/liter may result in abnormal bone formation in children. In 1983, 52% of the 226 public water systems with fluoride levels greater than 3 mg/liter were located in nonmetropolitan counties.⁴⁰

Twenty-one percent of domestic wastewater systems currently under enforcement action by the Texas Department of Water Resources are located in rural counties. The completed enforcement log for 1983 showed that 28% of the non-compliant systems were located in nonmetropolitan counties.⁴¹

Thirty-six percent of industrial and agricultural wastewater systems under enforcement action are in nonmetropolitan counties.⁴¹

Eighty-four percent of water rights and underground injection violations currently under enforcement action are in nonmetropolitan counties. Six of these are associated with brine disposal.⁴¹

Pesticides

Texas produces almost half of all chemicals manufactured in the U.S., creating 4 million metric tons of industrial (mainly hazardous) waste annually--amounting to 635 pounds per person.⁴²

150 to 450 million pounds of chemical pesticides are used annually in Texas--equal to 10-30 pounds for each person in the state--and making the state the nation's second largest pesticide consumer.⁴²

A 1980 study shows pesticide drift exposure up to 1/2 mile from fields, even under optimum spraying conditions.⁴³

Pesticide use increased 75% between 1972 (the year DDT was banned) and 1980. Yet the amount paid for these pesticides increased 400% during the same period.⁴⁴

One study indicates a trend among farmers to use of reduced-tillage farming systems, which require 30% more pesticides than conventional tillage systems.⁴⁴

Dam Safety

A survey conducted by the Texas Department of Water Resources between 1977 and 1981 revealed that there are 216 dams in Texas considered to be either hydraulically or structurally unsafe using U.S. Army Corps of Engineers criteria. Of those unsafe dams, 103 (48%) are located in nonmetropolitan counties of Texas.⁴⁵

Wastes: Hazardous Wastes

As of September 1984, Texas has 25 Superfund sites approved for federal cleanup aid. Two of these sites are located in nonmetropolitan counties: the Pig Road site is located in San Jacinto county and is an abandoned chemical disposal site where contamination of soil and groundwater has been recorded; the Crystal City site is located in Zavalla county and involves pesticide contamination.⁴⁶

Texas is one of the country's top hazardous waste producing states. In 1982, 26 million tons of this material was generated by Texas industries, and hospitals, research laboratories, and businesses produced an additional 38,500 tons.⁴⁷

Between February 1982 and May 1984, 378 reported spills of hazardous materials occurred in Texas. Twenty-seven percent of these spills occurred in nonmetropolitan counties.⁴⁸

The Texas Department of Water Resources responded to 231 hazardous waste spills of miscellaneous or unspecified materials. 129, or 56%, were in nonmetropolitan counties.⁴⁸

Wastes: Industrial Solid Wastes

Eighteen percent of the 189 sites currently under enforcement action for violation of the Texas Department of Water Resources Industrial Solid Waste Rules are located in nonmetropolitan counties.⁴⁹

Wastes: Municipal Wastes

A 1984 survey revealed that out of the 388 waste sites that serve communities of 1500 people or less, 126 had been sent enforcement letters for three or more violations, 26 were on a compliance schedule for repeated violations, and 8 were under review and possible legal action by the Attorney General's office.⁵⁰

Wastes: Spills

Between February 1982 and May 1984, the Texas Department of Water Resources responded to 739 oil spills. 193 of these spills, or 26%, occurred in nonmetropolitan counties. Of the 45 major oil spills reported, 29 (64%) occurred in nonmetropolitan counties. (An oil spill is classified as major if more than 240 barrels/1,000 gallons in inland waters or more than 2,400 barrels/10,000 gallons in coastal waters).⁴⁸

Wastes: Uranium

1-2 pounds of uranium produces 2,000 pounds of radioactive tailings. These tailings will be a hazardous contaminant for 80,000 years. Radiation from these tailings has been strongly associated with cancer, leukemia, and birth defects. There are 23 sites authorized to possess and use by-product material (uranium tailings or wastes) in Texas. Seventy-four percent of these sites are located in five nonmetropolitan counties: Duval, Jim Hogg, Karnes, Live Oak, and McMullen.⁵¹

There are four sites with uranium applications pending. All are located in nonmetropolitan counties.⁵¹

Health and Medical Facilities

There are presently 525 hospitals in Texas licensed by the Texas Department of Health--49% in nonmetropolitan areas.⁵²

Of the 69,145 hospital beds in Texas, 13,834 or 20% are located in nonmetropolitan counties.⁵²

There are 37 counties in Texas without a hospital. All but one of these are nonmetropolitan (see Map 1).⁵²

Thirty-nine percent of Texas hospitals have 50 beds or less. Two thirds of all hospitals in Texas have less than 100 beds.²⁵

In 1983 there were 2,496,202 admissions to hospitals in Texas. 436,459 or 17% of these admissions were to hospitals in nonmetropolitan counties.⁵³

The occupancy rate of Texas hospitals was 72% in 1983. It was 57% in nonmetropolitan hospitals and 72% in metropolitan hospitals.⁵⁴

On the average, patients' stay in Texas hospitals is 6.6 days. In nonmetropolitan hospitals it is 5.7 days and in metropolitan hospitals it is 6.8 days.⁵³

Forty-two percent of the state's 1,001 nursing homes are located in non-metropolitan areas.⁵⁵

There are 30 counties in Texas without a nursing home. All of these counties are nonmetropolitan (see Map 1).⁵⁵

All of the 13 state certified Health Maintenance Organizations (HMO) in Texas are located in metropolitan Texas.⁵⁶

The Association for Retarded Citizens/Texas has identified 199 residential facilities and services which serve persons who are mentally retarded or developmentally disabled. Twenty-one percent of these facilities are located in nonmetropolitan areas.⁵⁷

Outpatient emergency room visits during 1983 totalled 3,711,613 in Texas hospitals. 695,214 (19%) occurred in nonmetropolitan hospitals.⁵³

Health Manpower

Physicians

As of 1984, there are an estimated 593 people for every 1 physician in Texas. For metropolitan Texas there is 1 doctor for every 523 people, while in nonmetropolitan Texas there is 1 doctor for every 1,259 people.⁵⁸

Ten counties in Texas, all nonmetropolitan, do not have physicians (see Map 2). Population in these counties ranges from 90 in Loving county to 4,576 in Hartley county.⁵⁸

Data for 1984 indicate that there are 20,698 physicians providing direct patient care in Texas. Of these, 9,627 (47%) are classified as primary care physicians (specializing in general practice, family practice, internal medicine, pediatrics, and obstetrics/gynecology).⁵⁸

The ratio of direct patient care physicians to population in metropolitan Texas is 1:691, while in nonmetropolitan Texas this ratio is 1:1,456. Of the direct patient care physicians in metropolitan Texas, 44% practice primary care; in nonmetropolitan Texas 67% of all direct patient care physicians practice primary care.⁵⁸

There is 1 primary care physician in direct patient care for every 2,189 nonmetropolitan residents. For metropolitan residents, this ratio is 1:1,542.⁵⁸

Of the 13,891 medical specialists in Texas in 1983, 93% practiced in metropolitan counties and only 7% in nonmetropolitan counties.⁵⁹

There were 180 nonmetropolitan counties in Texas in 1983 which had no psychiatrists. Only 5% of the psychiatrists in Texas, or 58 psychiatrists, serve the nonmetropolitan population (1 for every 53,144 persons).⁵⁹

Only 8% of the ophthalmologists in Texas in 1983 served nonmetropolitan areas. The ratio of ophthalmologists to nonmetropolitan population in 1983 was 1 per 45,329 persons.⁵⁹

Ten percent of all physicians in metropolitan areas are over 65 years old, but 16% of the physicians in nonmetropolitan areas are over 65.⁵⁸

Nurses

Eleven percent of the 73,085 active registered nurses in Texas are providing care in nonmetropolitan Texas.⁶⁰

As of 1984, there are 4 counties in Texas, all nonmetropolitan, without active registered nurses (see Map 3).⁶⁰

There are an estimated 216 people for every active registered nurse in Texas. In nonmetropolitan areas there is 1 registered nurse for every 387 persons; in metropolitan areas the ratio is 1:194.⁶⁰

Of the 51,179 active licensed vocational nurses in Texas, 24% are practicing in nonmetropolitan areas.⁶¹

As of 1984, there are 8 counties in Texas, all nonmetropolitan, without active licensed vocational nurses.⁶¹

There are an estimated 308 people for every active licensed vocational nurse in Texas. In nonmetropolitan areas there is 1 licensed vocational nurse for every 253 persons; in metropolitan areas the ratio is 1:326.⁶¹

There are an estimated 127 people for every active nurse (R.N. or L.V.N.) in Texas. In nonmetropolitan areas there is 1 nurse for every 153 persons. In metropolitan areas the ratio is 1:122.^{60,61}

Nurse Midwives

There are 76 certified nurse midwives practicing nurse midwifery at the following locations in Texas: Air Force bases, Abilene, Amarillo, Arlington, Austin, Brownsville, Crystal City, Dallas-Fort Worth, Edinburg, El Paso, Harlingen, Hidalgo county, Houston, Killeen, Livingston, Los Fresnos, Lubbock, Odessa, Raymondville, Weslaco, and Wichita Falls.⁶²

Of the 76 certified nurse midwives practicing in Texas, only 4 practice in nonmetropolitan counties.⁶²

Advanced Nurse Practitioners

Of the 405 advanced nurse practitioners approved by the Board of Registered Nurse Examiners to practice in Texas as of January 11, 1985, 8% practice in nonmetropolitan areas, 84% practice in metropolitan areas, and the practice locations of 8% are unknown.⁶³

Special practice areas of advanced nurse practitioners in Texas include 31% family nurse practitioners, 16% pediatric nurse practitioners, 28% obstetrics/gynecology and nurse midwifery practitioners, 7% school nurse practitioners, and 18% practicing in other specialties.⁶³

Dentists

There are 29 counties in Texas without dentists (see Map 4). All are nonmetropolitan.⁶⁴

Of the 7,622 dentists listed as active by the Board of Dental Examiners, 13% reside in nonmetropolitan counties. There is at least one active dentist for every 3,110 persons in nonmetropolitan Texas, compared to one dentist for every 1,887 persons in metropolitan Texas.⁶⁴

Fourteen percent of the dentists engaged in private practice in Texas reside in nonmetropolitan counties.⁶⁴

Seventeen percent of the dentists in general practice reside in nonmetropolitan counties, where there is one dentist in general practice for every 3,449 persons. In metropolitan counties there is one dentist in general practice for every 2,887 persons.⁶⁴

Nonmetropolitan Texas accounts for 9% of the orthodontists, 4% of the oral surgeons, 3% of the pedodontists, 2% of the periodontists, 7% of the prosthodontists, 2% of the endodontists, and none of the oral pathologists in Texas.⁶⁴

Pharmacists

There are presently 12 counties throughout Texas that do not have an active pharmacist (see Map 3).⁶⁵

Of the 11,173 active pharmacists in Texas, 82% practice in metropolitan areas.⁶⁵

Texas has 1,412 people for every pharmacist in the state. In metropolitan areas there are 1,377 people per pharmacist, while nonmetropolitan areas have 1,575 people per pharmacist.⁶⁵

Other Health Manpower

As of December 1984, there were 314 physician assistants certified in Texas. Of these physician assistants, 42 (13%) were practicing in nonmetropolitan areas.⁶⁶

Of the 1,781 active physical therapists licensed in Texas, 91% are practicing in metropolitan areas. There are 106 counties without physical therapists; all are nonmetropolitan.⁶⁷

Only 22% of the 1,411 chiropractors in Texas are providing care in nonmetropolitan areas.⁶⁸

Texas has 1 certified or licensed psychologist for every 7,790 people in the state. However, there are 6,633 people for every psychologist in metropolitan areas and 26,051 people for every psychologist in nonmetropolitan areas.⁶⁹

Nonmetropolitan areas in Texas are served by 13% of the state's paramedics, 31% of the emergency medical technicians with special skills training, 30% of the emergency medical technicians, and 34% of the emergency care attendants.²⁷

Federal Health Programs

The U.S. Department of Health and Human Services has designated 150 counties in Texas as medically underserved. Of the 200 nonmetropolitan counties, 138 (69%) are medically underserved (see Map 5).⁷⁰

Of the 56 Texas counties designated as health manpower shortage areas for primary medical care, 50 are nonmetropolitan (see Map 6).⁷¹

The National Health Service Corps has 103 physicians working in Texas. Thirty-four (33%) of these physicians work in nonmetropolitan counties.⁷²

Fifteen federally funded Migrant Health Centers serve 37 counties in Texas. Of these counties, 30 are nonmetropolitan.⁷³

Twenty-eight federally funded Community Health Centers serve 63 counties in Texas. Of these counties, 50 are nonmetropolitan.¹⁰⁰

Agriculture

Texas has more farms and ranches than any other state: 186,000 of the nation's 2.4 million are within its borders. Farms and ranches cover almost 139 million acres in Texas, and the average farm size has doubled since 1940.⁷⁴

The state leads the nation in production of livestock, cotton, grain sorghum, wool, mohair, spinach and cabbage, and ranks second in production of grapefruit, cantaloupes, carrots, onions, peanuts and watermelons. It is also an important producer of rice, citrus, and wheat.⁷⁴

Texas is the third leading state in the nation in cash receipts from crops and livestock. Only California and Iowa are ranked higher. In farm marketing of crops alone, Texas is ranked fourth in the nation, and in farm marketings of livestock, Texas is second only to Iowa.⁷⁵

Since 1867 the plains and grasslands of Texas have supported more cattle than those of any other state. Its ranches managed 12% of all cattle, 15% of all beef breeding cows, and 12% of all calves in the U.S. in 1980.⁷⁴

The 10 largest cash producers for Texas farms are 1) cattle and calves (43%), 2) cotton lint and seed (14%), 3) wheat (6%), 4) sorghum grain (6%), 5) wholesale and retail milk (6%), 6) corn (3%), 7) greenhouse and nursery products (3%), 8) broilers (3%), 9) rice (3%), and 10) eggs (2%).⁷⁵

The 10 Texas counties reporting the highest cash receipts for the marketing of livestock and livestock products are Deaf Smith, Gonzales, Hopkins, Nacogdoches, Erath, Parmer, Shelby, Castro, Swisher, and Hartley.⁷⁵

The 10 Texas counties reporting the highest cash receipts for the marketing of crops are Hidalgo, Gaines, Hale, Wharton, Castro, Dawson, Parmer, Terry, Lamb, and Cameron.⁷⁵

Texas ranks first in commodity value of agricultural exports in 1) animal fats and greases, 2) cotton seed and cotton seed oil, 3) cotton and linters, and 4) hides and skins, including fur skins.⁷⁵

Accidental Death

The Texas Farm Bureau's Accidental Death Program paid 327 claims in 1982. Of these, 231 (71%) were paid on deaths which took place in nonmetropolitan counties. The 327 claims filed in 1982 represent an 8% decrease from the 554 claims filed in 1981. Up until 1982, the number of claims filed had shown a steady increase from 195 claims in 1974 to 354 claims in 1981--an 81% increase.⁷⁶

The Texas Farm Bureau reports 100 farm fatalities in rural areas in 1982. This is a 6% increase over the 94 fatalities recorded in 1981. These 94 fatalities of 1981 are the fewest fatalities recorded since such statistics began to be kept in 1966. The highest number of farm related deaths since 1966 took place in 1968, with 297 fatalities.⁷⁷

Economic Trends

Realized gross farm income increased 11% between 1980 and 1981. Total net farm income increased 11%, while total net income per farm increased 6% between 1980 and 1981. However, between 1979 and 1980, realized gross farm income decreased 9%; total net farm income decreased 53%; total net income per farm decreased 54%.⁷⁵

Between 1978 and 1981, total current farm operating expenses increased 40%.⁷⁵

Between 1981 and 1982 cash receipts from farm marketings for crops decreased 2%, cash receipts from farm marketings for livestock and livestock products decreased 0.3%, and cash receipts from total crops and livestock decreased 1%.⁷⁵

The seasonally averaged prices received by farmers for crops decreased 4% for cotton seed, 1% for sorghum grain, 10% for soybeans, and 6% for all hay between 1981 and 1982.⁷⁵

Between 1979 and 1982 the average price received by farmers decreased 11% for beef cattle, 33% for calves, 24% for sheep, and 22% for lambs.⁷⁵

The value of land and buildings on farm real estate increased 75% between 1978 and 1983. Thus, although total taxes levied on farm real estate have increased 10% and average taxes per acre have increased 11%, average taxes per \$100 of full value have decreased 24% between 1978 and 1981.⁷⁵

Between 1979 and 1983 total farm real estate debt increased 34%.⁷⁵

The annual average wage rate for both field and livestock workers increased 84% between 1974 and 1981.⁷⁵

Weather and Agriculture

As of July 1, 1984, the Texas Department of Agriculture estimated that the freeze of 1983 had cost over \$400 million in direct economic losses. A very conservative estimate of approximately \$1 billion is what the Department has estimated in direct economic loss due to the 1984 drought. 1984 marks the fourth consecutive year of this drought. The great bulk of this loss concerns livestock, with some wheat loss. The southern and western parts of the state have suffered most.⁷⁸

The Secretary of Agriculture has designated 197 Texas counties as having suffered substantial loss to agricultural production: 90 because of drought, 9 because of hurricane or flooding, 4 because of freezing, 85 adjacent to designated Texas counties, and 9 adjacent to designated counties in other states. Of these 197 counties, 158 are nonmetropolitan. These 158 represent 79% of the 200 nonmetropolitan counties in Texas.⁷⁹

The reality of the drought can be clearly seen in places such as Upton county. Kent Powell, Upton county agricultural extension agent, states that because of the drought only 200 head of cattle and 8,000 head of sheep remain in the county. The average for the county is 2,000 head of cattle and 44,000 head of sheep.⁸⁰

In Pecos county, there has been a 70% drop in the amount of livestock in the past 18 months, according to agricultural extension agent Zan Matties.⁸⁰

Crime

Between 1978 and 1983 the Total Crime Index increased 39% for nonmetropolitan counties. This compares with a 28% increase for metropolitan counties during the same period.^{81,82}

In 1983, nonmetropolitan counties reported:

- 12% of the murders
- 15% of the assaults
- 11% of the burglaries
- 8% of the rapes
- 10% of the larcenies and thefts
- 5% of the motor vehicle thefts
- 3% of the robberies, and
- 10% of the total crime in the state.⁸¹

The total value of livestock reported stolen during 1983 was estimated at \$3,077,383. Only 30% of this value was ever recovered.⁸¹

There were 705 cases of arson involving crops, timber, fences, signs, etc. in 1983. The estimated value of property damaged was \$430,082.⁸¹

Education

The ten wealthiest school districts in Texas are in nonmetropolitan counties. Two of the ten poorest school districts in the state are in nonmetropolitan counties.⁸³

Between 1960 and 1980, the median school years completed for persons living in nonmetropolitan counties rose from 9.32 to 11.42 years respectively. In contrast, the median school years completed for persons in metropolitan counties rose from 9.80 to 12.26 during the same period.⁸⁴

For those persons 18 years old or older living in nonmetropolitan counties:

- 48% have completed 3 years of high school or less
- 30% are high school graduates
- 14% have completed 1-3 years of college
- 5% have completed 4 years of college
- 4% have completed 5 years or more of college.¹

Thirty percent of the Texas public community or junior colleges are in nonmetropolitan counties.⁸⁵

Sixty-one percent of the school districts in Texas are located in nonmetropolitan counties. These nonmetropolitan school districts account for 20% of the total school enrollment for the state.^{22,86}

There are 189 programs in Texas which offer vocational services for persons who are mentally retarded. Forty-two percent of these programs are in nonmetropolitan areas.⁸⁷

The Head Start program, which give educational and environmental enrichment to economically disadvantaged preschool children, operates in 72 counties in Texas. Thirty-five (49%) of these counties are nonmetropolitan.⁸⁸

Energy

Oil and Gas

As of April 1984, 186,791 (76%) of the 245,934 producing oil and gas wells in Texas were located in nonmetropolitan counties.⁸⁹

4,620 (71%) of the 6,552 disposal wells associated with oil and gas are located in nonmetropolitan counties.⁸⁹

2,904 (77%) of the 3,772 abandoned oil and gas wells in Texas are located in nonmetropolitan counties.⁸⁹

78% of the 876,205,174 barrels of oil and 75% of the 5,643,182,864 million cubic feet of gas produced in Texas in 1983 came from nonmetropolitan counties.⁹⁰

The annual average price for a barrel of Texas crude oil at the wellhead has declined 16.4% between 1981 and March of 1984.⁹¹

Coal

Texas leads the nation in production of lignite.⁹²

In 1983, seven nonmetropolitan counties produced 98% of the coal mined in Texas. In order of tons of coal produced, these counties were: Panola, Hopkins and Titus, Freestone, Milam, Atascosa, and Grimes.⁹³

A 1979 inventory by the Bureau of Economic Geology at the University of Texas found 249 abandoned lignite and coal mines in Texas. Of these abandoned mines, over 80% (202) are found in nonmetropolitan counties.⁹⁴ A Texas Railroad Commission official estimates that there are hundreds more unknown abandoned mines located throughout the state.⁹⁵

In 1983, all thirteen of the power plants in Texas using Texas coal were located in nonmetropolitan counties. Half of the fourteen power plants using imported coal were located in nonmetropolitan counties.⁹²

Based on 1979 dollars, the dollar cost per million BTU for Texas coal is projected to remain significantly less than that of natural gas, imported crude, domestic crude, and imported bituminous coal for the remainder of the century.⁹²

Uranium

All uranium mines in Texas are located in five nonmetropolitan counties in south Texas--McMullen, Atascosa, Live Oak, Karnes and Gonzales.⁹²

All the open pit uranium mines which produced ore prior to the development of the Surface Mining Act in June of 1976 are located in two nonmetropolitan counties--Karnes and Live Oak.⁹⁶

In 1981, Texas ranked third in the nation in thousands of short tons of uranium oxide produced.⁹²

The price of uranium oxide declined from \$43 per pound in 1979 to \$17.50 per pound in 1984--a 59% drop in five years. The result has been fewer persons employed and a shrinking tax base for the nonmetropolitan counties in the uranium mining region of south Texas.^{91,92}

In 1984, of the four companies permitted to surface mine uranium ore in Texas, only the Chevron Company is actively engaged in surface mining, with projects in nonmetropolitan Karnes and Gonzales counties.^{91,92}

In 1983, Chevron's Panna Maria project in Karnes county produced all the uranium ore mined in Texas--700,000 tons.⁹²

Housing

Of the occupied housing units in Texas which either lacked completed plumbing facilities or shared facilities with another household in 1980, 32% are located in nonmetropolitan areas.⁹⁷

There were nine counties in Texas in 1980 in which more than 10% of the occupied housing units lacked completed plumbing facilities or shared facilities with another household. All nine counties were nonmetropolitan.⁹⁷

Twenty-six percent of the Texas occupied housing units which housed 1.01 or more persons per room in 1980 were located in nonmetropolitan areas.⁹⁷

Five of the eight Texas counties in which more than 20% of the occupied housing units housed 1.01 or more persons per room in 1980 were nonmetropolitan.⁹⁷

Transportation

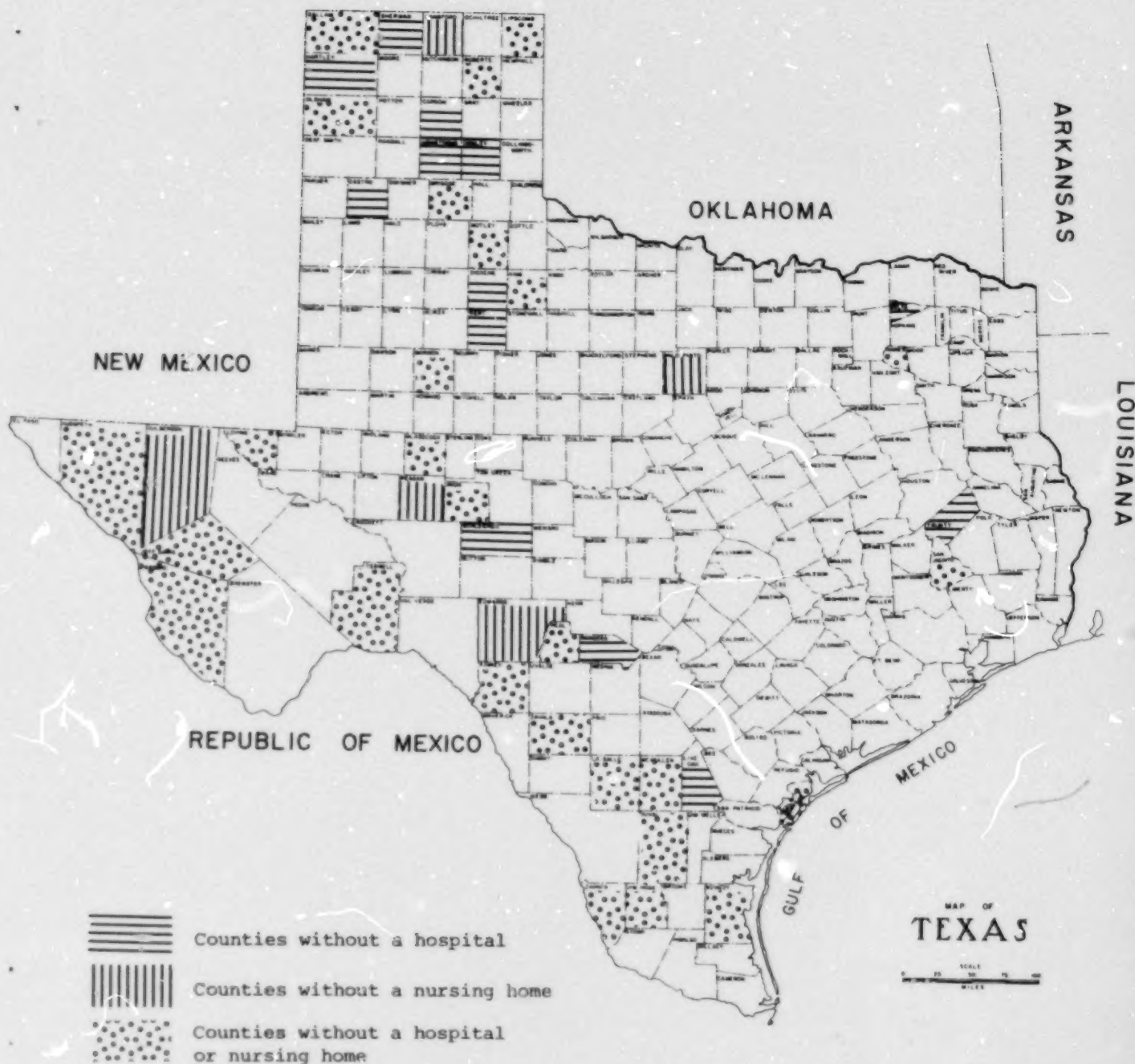
Twenty-one percent of the vehicles registered in Texas in 1983 were registered in nonmetropolitan counties, making the ratio of vehicles to people approximately the same (1:1) for metropolitan and nonmetropolitan areas. However, of the \$89,520,272 of vehicle registration fees retained by counties, 58% went to nonmetropolitan counties. These counties account for 17% of the total deposits to the state highway fund.⁹⁸

There are 85,055 rural households in Texas which have no automobile available. This accounts for 8% of the households in rural Texas.¹

According to the Texas State Department of Highways and Public Transportation, there were 62,862 miles of highways in rural areas as of August 31, 1984, as compared to 8,313 in urban areas. This figure includes 2,206 miles of interstate highway, 22,065 miles of U.S. and state highway, and 38,594 miles of farm or ranch to market and recreational roads. The Department also maintains an additional 136,843 miles of other rural roads, including 112,118 miles of unpaved roads.⁹⁹

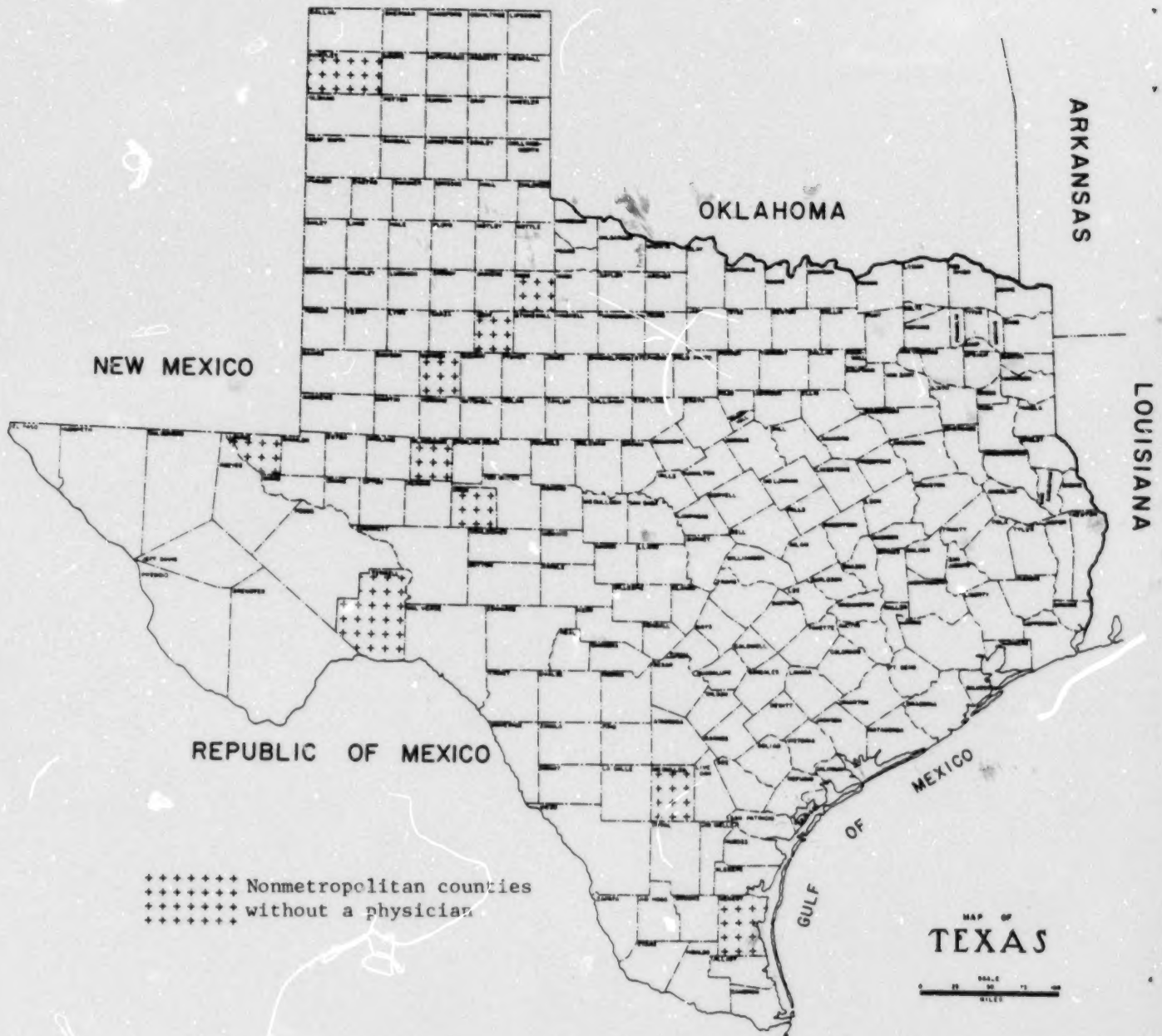
Map 1

Nonmetropolitan Counties in Texas
Without Hospitals and/or Nursing Homes



Source: Texas Department of Health, 1984.

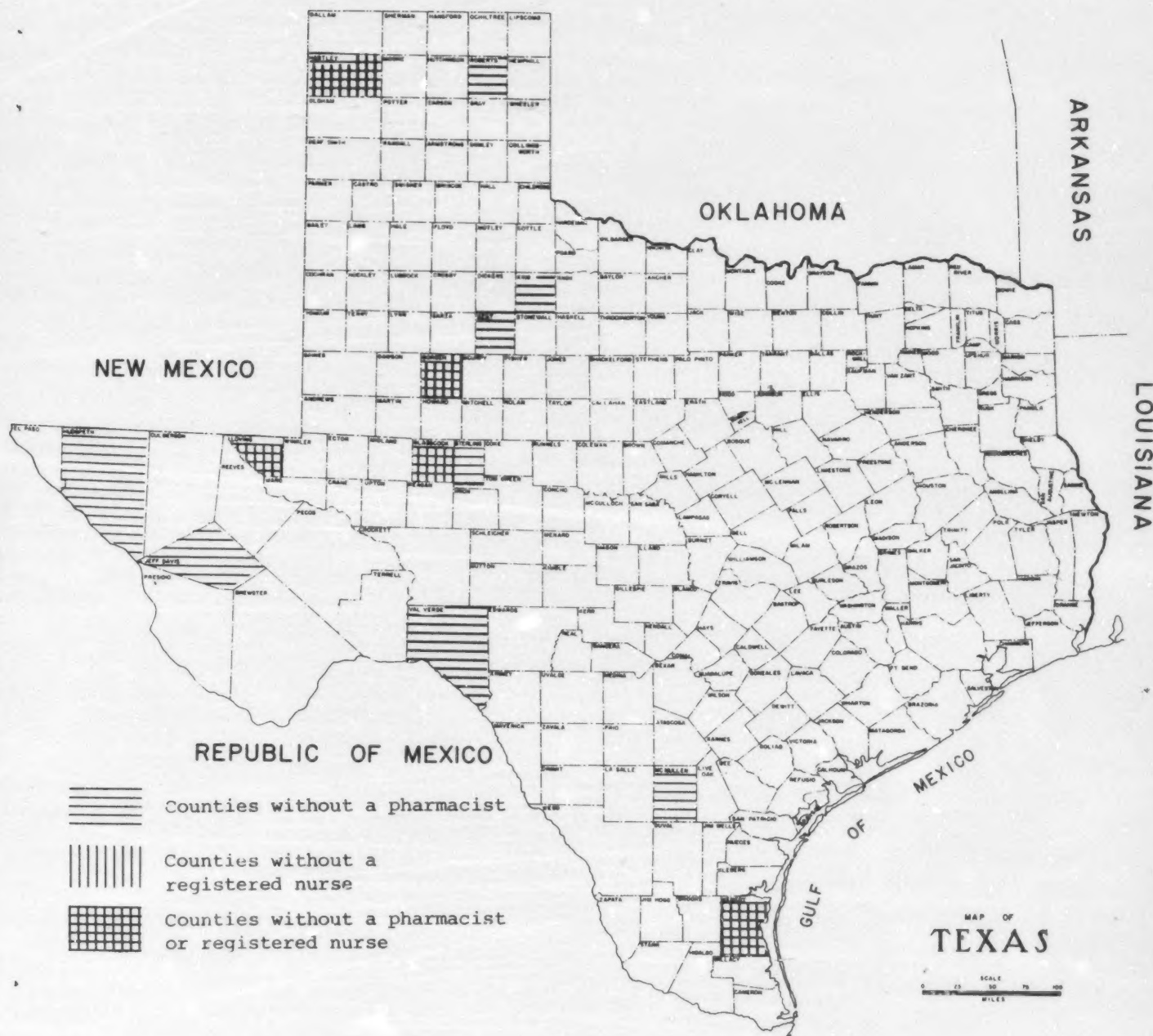
Nonmetropolitan Counties in Texas
Without a Physician



Source: Bureau of State Health Planning and Resource
Development, Texas Department of Health,
Austin, Texas, 1984.

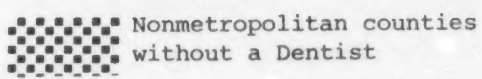
Map 3

Nonmetropolitan Counties in Texas Without A
Pharmacist and/or Registered Nurse



Source: Texas Department of Health, Bureau of State Health Planning and Resource Development, 1984.

Without a Dentist

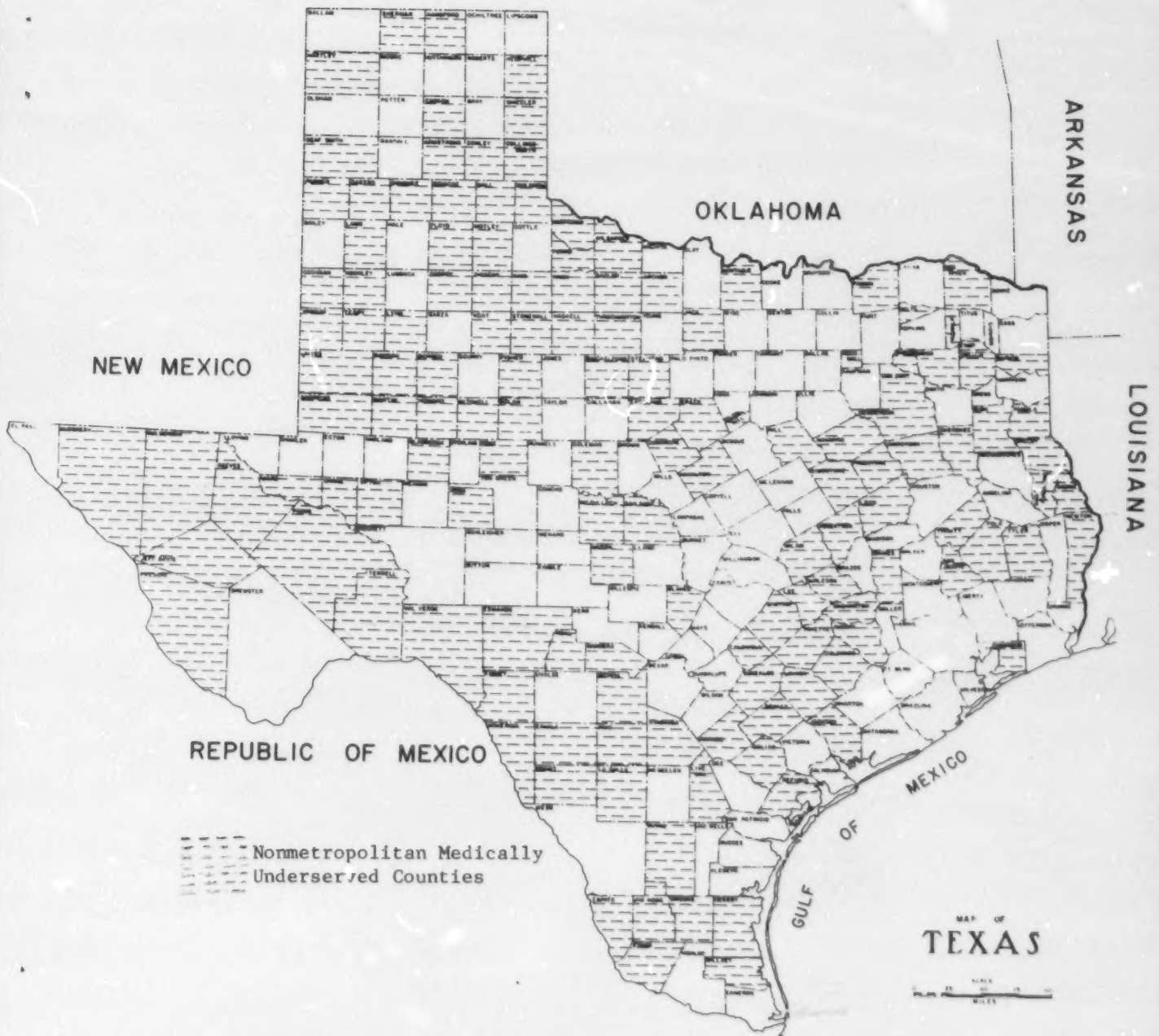


MAP OF
TEXAS

SCALE
0 25 50 75 100
MILES

Map 5

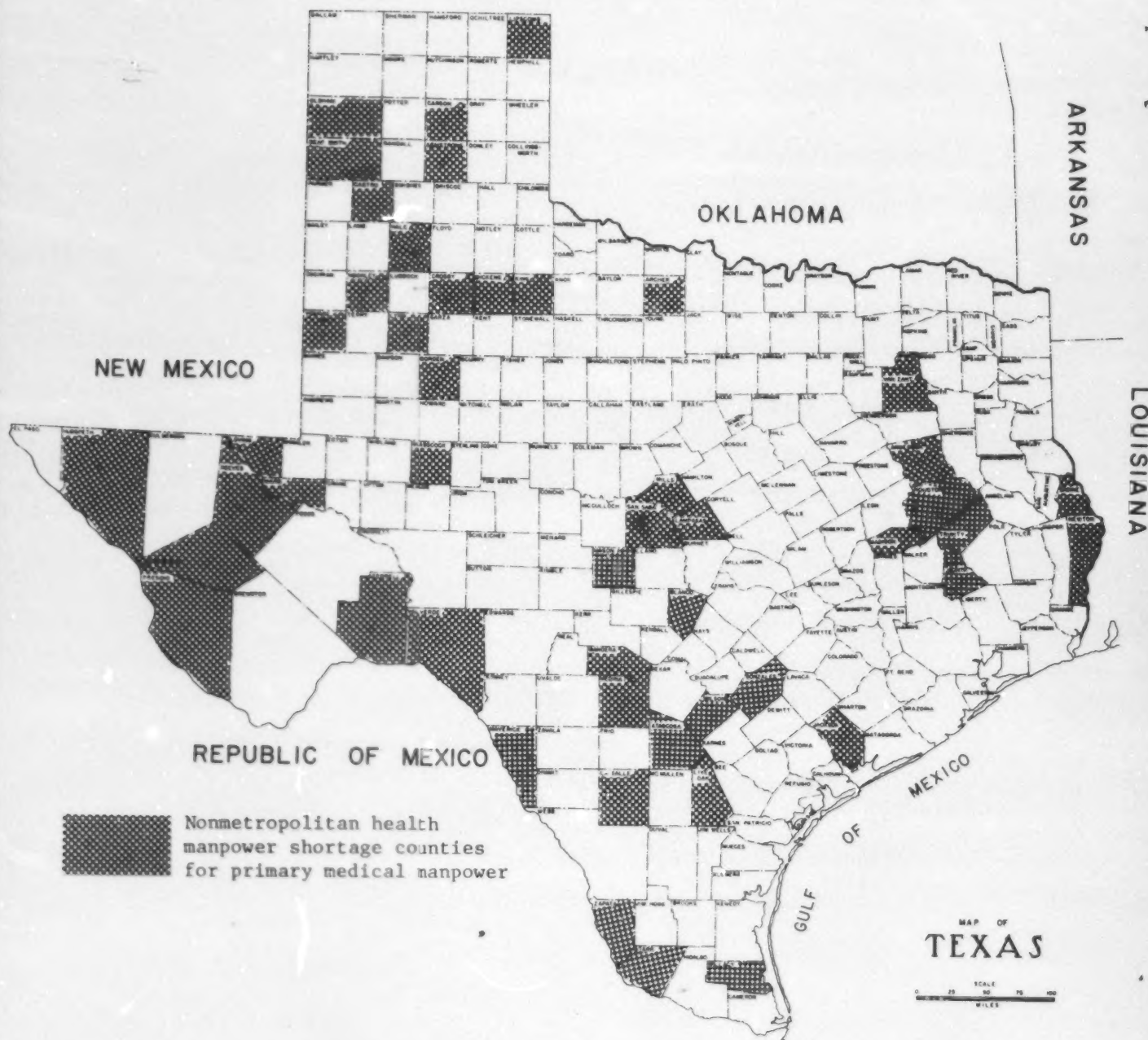
Nonmetropolitan Medically Underserved
Counties in Texas



Source: Regional Office, U.S. Department of Health
and Human Services, Dallas, Texas, November 1984.

Map 6

Nonmetropolitan Counties in Texas
Designated as Health Manpower Shortage Areas
for Primary Medical Manpower



Source: Federal Register, August 19, 1983 and May 17, 1984.

BEST COPY AVAILABLE

References

1. 1980 Census of Population and Housing. Washington, D.C.: Bureau of the Census, 1982.
2. Texas Almanac and State Industrial Guide 1981-1982. Dallas: A. H. Belo Corporation, 1983.
3. Klinefelter, Karen. "Texas: An Essay." Sky, June 1983.
4. Kantor, Seth. "Texas is Likely to Become 2nd in Population." Austin (Texas) American Statesman, February 26, 1984.
5. Population and Projections for the State of Texas 1970-2000. Austin: Texas Department of Water Resources, undated.
6. "Texas Ranks No. 2 in Population Forecast for Year 2000." Austin (Texas) American Statesman, September 9, 1983.
7. County Median Age 1950-60-70-80. Unpublished list. College Station: Texas Agricultural Extension Service, 1984.
8. Texas Vital Statistics 1983. Austin: Bureau of Vital Statistics, Texas Department of Health, 1984.
9. Percent of Women in Labor Force in Texas Counties Age 16 Years and Over 1950-1980. Unpublished list. College Station: Texas Agricultural Extension Service, 1984.
10. Poverty Information from 1980 Census by County. Austin: Economic Opportunity Division, Texas Department of Community Affairs, undated.
11. Environmental Assumptions. Austin: Texas Department of Human Resources, 1984. Unpublished list.
12. Texas Department of Human Resources 1984 Annual Report. Austin: Texas Department of Human Resources, 1985.
13. "Labor Force Estimates for Texas Counties." Austin: Texas Employment Commission, 1983.
14. "Covered Employment and Wages by Industry and County." Austin: Texas Employment Commission, 1983.
15. "Live Births; Infant, Neonatal, Maternal and Fetal Deaths, Rates and Ratios per 1,000 Live Births by County and City of Residence." Austin: Bureau of Vital Statistics, Texas Department of Health, 1984.
16. County and PHR Live Birth Profile, Texas Residents 1983. Austin: Bureau of Maternal and Child Health, Texas Department of Health, 1984.
17. "Live Births by Place of Residence--1983." Austin: Bureau of Vital Statistics, Texas Department of Health, 1984.

18. Migration for Birth 1983. Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, September 1984.
19. Maternal and Child Health Services in Texas 1983. Austin: Bureau of Maternal and Child Health, Texas Department of Health, 1984.
20. Collins, Glenn. "Migration Turns Elderly Toward Cities." Austin (Texas) American Statesman, August 26, 1984.
21. Population Data by County within Regions. Austin: Texas Department on Aging, undated.
22. Interim Draft Report of the House Committee on Retirement and Aging, 68th Legislature. Austin: Texas State House of Representatives, undated.
23. Texas Health Care Association, Austin, Texas. Telephone conversation, February 5, 1985.
24. A Survey of Abuse of the Elderly in Texas. Austin: Gray Panthers of Austin, February 1983.
25. Motor Vehicle Traffic Accidents. Austin: Texas Department of Public Safety, 1983.
26. Texas Public School Immunization Report. Austin: Texas Department of Health, April 1984.
27. Emergency Medical Services Division, Bureau of Emergency Management, Texas Department of Health, Austin, Texas. Computer printout, May 24, 1984.
28. Data Book 1983. Austin: Texas Department of Mental Health and Mental Retardation, 1983.
29. Wet-Dry Status of Texas Counties As of August 31, 1983. Austin: Texas Alcoholic Beverage Commission, 1983.
30. Texas State Plan for the Prevention, Treatment and Control of Alcohol Addiction and Abuse. Austin: Texas Commission on Alcoholism, 1984.
31. Texas State Plan for the Prevention, Treatment, and Control of Alcohol Addiction and Abuse. Austin: Texas Commission on Alcoholism, 1981.
32. Slesinger, Doris P. Health Needs of Migrant Workers in Wisconsin. Madison, Wisconsin: University of Wisconsin Extension Service, July 1979.
33. "Statewide Household Prevalence Survey, Preliminary Report." Fort Worth: Center for Organizational Research and Evaluation Studies, Texas Christian University, December 1982.
34. Problem Drinking Profile. Austin: Texas Commission on Alcoholism, 1982.

35. Adult Drug Abuse. Austin: Uniform Crime Reporting Bureau, Texas Department of Public Safety, 1983.
36. Juvenile Drug Abuse. Austin: Uniform Crime Reporting Bureau, Texas Department of Public Safety, 1983.
37. Texas Survey on Drug Abuse. Austin: Texas Department of Community Affairs, 1980.
38. Texas Air Control Board, Austin, Texas. Computer printout, June 22, 1984.
39. Belyea, Steve. Texas Air Control Board, Austin, Texas. Personal conversation, June 29, 1984.
40. Chemical Analyses of Public Water Systems. Austin: Texas Department of Health, 1983.
41. Wastewater Enforcement Log (unpublished). Austin: Texas Department of Water Resources, 1984.
42. Pesticides in Texas: A Fact Sheet. Austin: Texas Center for Rural Studies, undated.
43. Conrad, O. M. Miller. "A Mathematical Model of Aerial Deposition of Pesticides from Aircraft." Environmental Science and Technology, Vol. 14, July 1980.
44. "The Hidden Health Effects of Pesticides." Chronic Health Effects of Modern Farming Practices. Walthill, Nebraska: Center for Rural Affairs, April 1984.
45. Texas Department of Water Resources, Austin, Texas. Unpublished list, 1984.
46. Colbert, Bill. Abandoned Site Response Unit, Enforcement and Field Services Division, Texas Department of Water Resources, Austin, Texas. Personal conversation, June 25, 1984.
47. "The High Cost of Hazardous Waste." Fiscal Notes, August 1984.
48. Texas Department of Water Resources, Austin, Texas. Computer printout, 1984.
49. Solid Waste Enforcement Log (unpublished). Austin: Texas Department of Water Resources, 1984.
50. Fusilier, Rusty. Division of Wastewater Technology and Surveillance, Texas Department of Health, Austin, Texas. Personal conversation, 1984.
51. "Radioactive Materials Licensees in Texas." Austin: Bureau of Radiation Control, Division of Environmental Programs, Texas Department of Health, 1984.

52. Directory of Hospitals Licensed by the Texas Department of Health. Austin: Hospital and Professional Licensure Division, Texas Department of Health, March 14, 1984.
53. Bureau of State Health Planning and Resource Development, Texas Department of Health, Austin, Texas. Computer printout, January 19, 1985.
54. Hospital Statistics. Chicago: American Hospital Association, 1984.
55. Directory of Texas Long Term Care Facilities. Austin: Quality Standards Division, Texas Department of Health.
56. Texas HMO Status Report. Austin: Texas State Board of Insurance, 1984.
57. Directory of Texas Residential Facilities and Services Which Serve Persons Who Are Mentally Retarded/Developmentally Disabled. Austin: Association for Retarded Citizens/Texas, undated.
58. "Texas Department of Health Manpower Special Reports: Licensed Physicians in Texas." Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, 1984.
59. Bureau of State Health Planning and Resource Development, Texas Department of Health, Austin, Texas. Computer printout, 1985.
60. "Texas Department of Health Manpower Special Reports: Registered Nurses Practicing in Texas." Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, 1984.
61. "Texas Department of Health Manpower Special Reports: Licensed Vocational Nurses Practicing in Texas." Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, 1984.
62. Locke, Nancy. Chairperson, Consortium of Texas Certified Nurse Midwives, Houston, Texas. Telephone conversation, December 12, 1984.
63. Texas State Board of Nurse Examiners, Austin, Texas, 1985.
64. Texas State Board of Dental Examiners, Austin, Texas. Computer printout, 1984.
65. "Texas Department of Health Manpower Special Reports: Pharmacists Licensed in Texas." Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, 1984.
66. Texas State Board of Medical Examiners, Austin, Texas, 1985.
67. "Texas Department of Health Manpower Special Reports: Physical Therapists Licensed in Texas." Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, 1984.
68. "Texas Department of Health Manpower Special Reports: Chiropractors Licensed in Texas." Austin: Bureau of State Health Planning and Resource Development, Texas Department of Health, 1984.

69. Texas State Board of Examiners of Psychologists Roster. Austin: Texas State Board of Examiners of Psychologists, April 1983.
70. "Indicator Values and Weighted Index Scores Used to Determine MUA Status by County Within State." Dallas: U.S. Department of Health and Human Services Regional Office, October 12, 1983.
71. Federal Register, Volume 48, No. 162, August 19, 1983.
72. Texas Department of Health, Austin, Texas. Unpublished list, 1984.
73. Directory of Migrant Health Centers. Austin: National Migrant Referral Project, April 1984.
74. Klinefelter, Karen. "Texas at Work." Sky, June 1983.
75. Cash Receipts, Prices Received and Paid By Farmers 1982. Austin: Crop and Livestock Reporting Service, Texas Department of Agriculture, 1982.
76. 1982 Texas Farm Bureau Accidental Death Program. Waco: Texas Farm Bureau, 1983.
77. Farm Fatalities--1982. Waco: Texas Farm Bureau, 1983.
78. Betty, Leland. Texas Department of Agriculture, Austin, Texas. Personal conversation, July 11, 1984.
79. U.S. Agricultural Stabilization and Conservation Service, College Station, Texas. Unpublished list, 1984.
80. "Parched Texas Keeps Eye on Skies." Austin (Texas) American Statesman, September 9, 1984.
81. Crime in Texas 1983. Austin: Texas Department of Public Safety, 1983.
82. Crime in Texas 1978. Austin: Texas Department of Public Safety, 1978.
83. Wealth Ranks Listed in County-District Order. Austin: Texas Education Agency, October 16, 1984.
84. Trend in Median School Years Completed by Persons in Texas by County: 1950-1980.
85. Occupational-Technical Programs Offered in Texas Public Community/Junior Colleges. Austin: Division of Post-Secondary Programs, Texas Education Agency, November 1983.
86. Texas Public School District Original Entries by Grade 1982-1983. Austin: Division of Information Analysis, Texas Education Agency, August 12, 1983.
87. Directory of Texas Vocational Services for Persons Who Are Mentally Retarded. Austin: Association for Retarded Citizens/Texas, October 1982.

88. Directory of Texas Mental Retardation Programs and Services. Austin: Texas Association for Retarded Citizens, undated.
89. "Gas Well Counts by County as of April 1984." Austin: Railroad Commission of Texas, 1984.
90. "Production Statistics by County for the Year 1983." Austin: Railroad Commission of Texas, 1984.
91. Rountree, Richard. Surface Mining and Reclamation Division, Railroad Commission of Texas, Austin, Texas. Personal communication, October 29, 1984.
92. Information and Statistical Facts on Coal and Uranium Mining in Texas. Austin: Surface Mining and Reclamation Division, Railroad Commission of Texas, August 1982.
93. Coal Surface Mining Operations, Report on Activities January through December 1983. Austin: Railroad Commission of Texas, 1984.
94. "Inventory of Abandoned Lignite and Bituminous Coal Mines in Texas" (map). Austin: Bureau of Economic Geology, The University of Texas at Austin, November 1979.
95. Douglas, Larry. Surface Mining and Reclamation Division, Railroad Commission of Texas, Austin, Texas. Personal conversation, July 24, 1984.
96. Completed Mines--Pre-Statute. Austin: Railroad Commission of Texas, undated.
97. The Texas Substandard Housing Survey, Part I. Austin: Economic Opportunity Division, Texas Department of Community Affairs, undated.
98. Allocation of Vehicle Registration Fees. Austin: Motor Vehicle Division, Texas State Department of Highways and Public Transportation, 1983.
99. Road Mileage Summary. Austin: Texas State Department of Highways and Public Transportation, 1984.
100. Task Force on Indigent Health Care Final Report. Austin: Task Force on Indigent Health Care, December 1984.